

Listing of Claims:

1 – 14 (cancelled)

15. (previously presented) A method for delivering a short message from a foreign mobile network to a user or application server in a home mobile network, the home and foreign networks operating with non-compatible protocols, the method comprising the steps of:

an SMSC of the foreign network querying a pseudo HLR in the home network, said pseudo HLR operating with the protocol of the foreign network, to determine a serving MSC;

the pseudo HLR providing to the foreign network SMSC an address of a pseudo MSC in the home network, said pseudo MSC operating with the protocol of the foreign network;

the foreign network SMSC routing the message to the pseudo MSC, wherein the pseudo MSC terminates the message delivery attempt by sending an acknowledgement to the foreign network SMSC; and

a mobile network node in the home network performing protocol conversion of the message to an access protocol and routing the message using said access protocol to a receiving node in the home network.

16. (previously presented) The method as claimed in claim 15, wherein the receiving node is a home network SMSC and the method comprises the further step of the home network SMSC routing the message to a destination user or application server.

17. (previously presented) The method as claimed in claim 15, wherein the receiving node is an inter-working gateway, and said inter-working gateway

routes the message to a home network SMSC and the home network SMSC routes the message to a destination user or application server.

18. (previously presented) The method as claimed in claim 15, wherein the receiving node is an SMS application server.

19. (previously presented) The method as claimed in claim 15, wherein the access protocol is SMPP.

20. (previously presented) The method as claimed in claim 15, wherein the pseudo HLR and the pseudo MSC communicate with the foreign network SMSC via a signalling network.

21. (previously presented) The method as claimed in claim 20, wherein the signalling network is an SS7 network.

22. (cancelled)

23. (previously presented) The method as claimed in claim 15, wherein:

the mobile network node operates as a pseudo SMSC adapted to operate with the protocol of the foreign network when communicating with the foreign network and with an access protocol when communicating with elements of the home network, and said pseudo SMSC sends the message to the receiving node using the access protocol; and

the pseudo SMSC, in case of delivery failure due to a temporary condition, performs a retry of sending the message to the receiving node and receives a delivery acknowledgement.

24. (previously presented) The method as claimed in claim 15, wherein:

the receiving node is a home network SMSC and the method comprises the further step of the home network SMSC routing the message to a destination user or application server;

the mobile network node operates as a pseudo SMSC adapted to operate with the protocol of the foreign network when communicating with the foreign network and with an access protocol when communicating with elements of the home network, and said pseudo SMSC sends the message to the home network SMSC using the access protocol; and

the pseudo SMSC, in case of delivery failure due to a temporary condition, performs a retry of sending the message to the receiving node and receives a delivery acknowledgement.

25. (previously presented) The method as claimed in claim 15, wherein:

the receiving node is an inter-working gateway, and said inter-working gateway routes the message to a home network SMSC and the home network SMSC routes the message to a destination user or application server;

the mobile network node operates as a pseudo SMSC adapted to operate with the protocol of the foreign network when communicating with the foreign network and with an access protocol when communicating with elements of the home network, and said pseudo SMSC sends the message to the inter-working gateway using the access protocol; and

the pseudo SMSC, in case of delivery failure due to a temporary condition, performs a retry of sending the message to the inter-working gateway and receives a delivery acknowledgement.

26. (previously presented) A mobile network node adapted to deliver a short message from a foreign mobile network to a user or application server in a home

mobile network, the home and foreign networks operating with non-compatible protocols, the mobile network node being adapted to reside in the home network and comprising a pseudo HLR operating with the protocol of the foreign network and a pseudo MSC operating with the protocol of the foreign network, and the mobile network node being adapted to perform the steps of:

the pseudo HLR receiving from an SMSC of the foreign network a query to determine a serving MSC;

the pseudo HLR providing to the foreign network SMSC an address of the pseudo MSC;

the pseudo MSC receiving the message from the foreign network SMSC;

the pseudo MSC terminating the message delivery attempt by sending an acknowledgement to the foreign network SMSC; and

performing protocol conversion of the message to an access protocol and routing the message using said access protocol to a receiving node in the home network.

27. (previously presented) The mobile network node as claimed in claim 26, wherein the node is adapted to receive from a home network SMSC, via the access protocol, a message addressed to the foreign network, and for performing protocol conversion of the message and delivering it to a recipient in the foreign network.
28. (previously presented) The mobile network node as claimed in claim 26, wherein the mobile network node is adapted to route the message using said access protocol to a home network SMSC as the receiving node.

29. (previously presented) The mobile network node as claimed in claim 26, wherein the mobile network node is adapted to route the message using said access protocol to an inter-working gateway as the receiving node.
30. (previously presented) The mobile network node as claimed in claim 26, wherein the mobile network node is adapted to generate an error code including error codes indicating network resource shortage, destination out of service, message termination denied, and network failure.
31. (previously presented) The mobile network node as claimed in claim 26, wherein the mobile network node is adapted to perform address translation.
32. (previously presented) A mobile network node adapted to deliver a short message from a foreign mobile network to a user or application server in a home mobile network, the home and foreign networks operating with non-compatible protocols, the mobile network node being adapted to reside in the home network and comprising a pseudo HLR operating with the protocol of the foreign network and a pseudo MSC operating with the protocol of the foreign network, and the mobile network node being adapted to perform the steps of:

the pseudo HLR receiving from an SMSC of the foreign network a query to determine a serving MSC;

the pseudo HLR providing to the foreign network SMSC an address of the pseudo MSC;

the pseudo MSC receiving the message from the foreign network SMSC;

the pseudo MSC terminating the message delivery attempt by sending an acknowledgement to the foreign network SMSC; and

performing protocol conversion to an access protocol and routing the message using said access protocol to a receiving node in the home network; and

wherein the node is adapted to receive from a home network SMSC, via the access protocol, a message addressed to the foreign network, and for performing protocol conversion of the message and delivering it to a recipient in the foreign network;

wherein the mobile network node is adapted to generate an error code including error codes indicating network resource shortage, destination out of service, message termination denied, and network failure; and

wherein the mobile network node is adapted to perform address translation.

33. (previously presented) The method as claimed in claim 15, wherein the access protocol is UCP.
34. (previously presented) The method as claimed in claim 33, wherein the access protocol is UCP over IP.
35. (previously presented) The method as claimed in claim 19, wherein the access protocol is SMPP over IP.